Bottcher, Helen

From: (b) (6)
Sent: Thursday, June 30, 2016 12:15 AM
To: wyckoffcomments
Cc: Skadowski, Suzanne
Subject: Gander Wyckoff Comment #4

Hello Ms. Skadowski:

Please send me a quick reply to acknowledge your receipt of this comment.
Thank you.

The purpose of this comment is to request a revision of the construction of the Alternatives presented in the April 2016 FFS regarding OU2/4. In that document, Alternative 7 (in-situ stabilization/solidification [ISS]) is presented as the preferred Alternative. I present two reasons why a revision is warranted:

1. A statement in the local newspaper by environmental professionals Janet Knox and D. Fehsenfeld point out reasons why Alternative 4, not Alternative 7, should be the recommended alternative because it actually ranks higher than Alternative 7 when using the National Contingency Plan's required Nine Balancing Criteria. I have put their statement at the bottom of this comment.

2. Alternative 6 should be modified - and can be responsibly modified - to bring the costs down to a level where the Nine Balancing Criteria assessment score for this thermal destruction-based Alternative would be higher than Alternatives 4 and 7. As I have explained elsewhere, the permanence element of Alternative 6 makes Alternative 6 the best choice, it just needs to be packaged in a reasonable way. Remember: ISS (whether it's Alternative 4 or 7) is not permanent, and the thermal destruction of Alternative 6 is permanent and is obviously superior in the Long-Term Effectiveness and Permanence criteria rating compared to Alternatives 4 or 7 (i.e., I also note that the Long-Term Effectiveness and Permanence three star rating for Alternative 7 was the same as Alternative 6 in the FFS, which appears illogical-please clarify). The thermal destruction of Alternative 6 destroys the leachate and in the long-term, significantly reduces the Operations and Maintenance costs of Alternatives 4 and 7 and also significantly reduces the project management and administrative costs of EPA/Ecology and their consultants in the long-term management of this site.

The cost of Alternative 6 ($161M) as presented in the FFS is considerably higher than the recommended Alternative 7 ($82M), and Alternative 4 ($89M). However, the Alternative 6 cost can be reduced substantially (for example) as follows:

-<u>Abandon the approximately $10M piece of Alternative 6 that employs thermal enhanced extraction (TEE).</u> This is a version of the poorly-performing steam injection pilot testing research and development adventure of 2003. Yes, we now have lessons learned and the engineers have a new plan to optimize the implementation of this technology at this complex site. I submit that not invoking TEE and simply augmenting the low-cost, passive, slower, but effective enhanced aerobic biodegradation (EAB) for contamination below soils to be treated by thermal desorption is a more responsible use of taxpayer money, i.e., as much money as possible should be used for thermal desorption.

-Abandon unnecessary portions of the $40M Common Elements costs that are not essential to a thermal destruction-based Alternative 6 preferred remedy. Approximately $9-10M can be shaved off the conservatively-constructed Common Elements if TEE is abandoned from Alternative 6, and if the focus is on removal to 15 feet below grade (not 20 feet as Alternative 6 is now presented - see next bullet below); and if the 15 foot removal depth focuses more on hotspots defined in the TarGOST characterization work. The following is a high-level overview of where costs can be reduced:

-$ 1M: Concrete Demolition, Decontamination, and Reuse;
-$ 2M: Sitewide Debris Removal;
-$ 2M: Bulkhead Debris Removal;
-$ 3.4M: Concrete Perimeter Bulkhead Wall (this money can be saved if the construction of the 1,900-foot-long wall is to
30 feet [not 38 feet]);
-$ 1M: New Outfall

-Reduce the Alternative 6 Removal Depth from 20 to 15 feet & More Efficiently Use the TarGOST Data for Hotspot Removal.

Per WAC 173-340-740(6) on page 2-1 of the FFS, applying thermal desorption to the top 15 feet of contamination along with institutional controls can reduce costs on the order of $10M. Costs will be lowered because dewatering challenges are lessened when excavating to 15 feet instead of 20 feet, thereby raising the Implementability criteria score for Alternative 6.

The three bullets above present viable ways to reduce the Alternative 6 costs on the order of $30M. A more detailed engineering analysis can be accomplished along these lines to further reduce costs that will bring the score of a modified Alternative 6 to a point where it becomes the preferred remedy. Revise the FFS accordingly.

Malcolm Gander, Ph.D., LG, LHG

Knox/Fehsenfeld Statement:

"To the editor:

We encourage everyone to submit public comments on EPA's Wyckoff/Eagle Harbor Proposed Plan and Feasibility Study (cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=1000612).

As Bainbridge Islanders and Technical Assistance Grant Committee members, we've witnessed and reviewed Wyckoff/Eagle Harbor's investigation and cleanup for almost 30 years.

As environmental geochemist and technical readers, we recognize the site's complexities and respect the EPA's willingness to reassess the preferred remedy in light of the last 15 years' technological developments, however, EPA needs public comments to encourage them to more completely clean up the site sooner.

We find that while EPA prefers Alternative 7, Alternative 4 would rank higher than Alternative 7 using the National Contingency Plan's required Nine Criteria because Alternative 4 achieves protectiveness in a shorter time frame with less impacts on the community by traffic, noise and road maintenance, returning the site to the community for use as a park sooner.

With Alternative 4, the beach cleanups can be consolidated and treated as part of the upland and then capped.

We strongly recommend seizing two valuable opportunities:

Using designs from the Seattle Seawall Project to maximize the habitat value of the new concrete bulkhead and including bicycle lanes in road upgrades for cyclist and pedestrian safety to mitigate the considerable active cleanup traffic.
Where possible, equipment and materials should be transported by barge rather than by truck via roadways.
JANET N. KNOX AND D. THOMAS FEHSENFELD"